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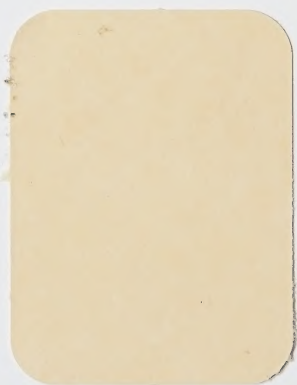
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4 DEPARTMENT OF THE INTERIOR
TOPOGRAPHICAL SURVEY OF CANADA

BULLETIN NO. 40

REVISED SHEETS

OF THE

SECTIONAL MAP OF CANADA



OTTAWA: F. A. ACLAND
PRINTER TO THE KING'S MOST EXCELLENT MAJESTY
1925



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DEPARTMENT OF THE INTERIOR
TOPOGRAPHICAL SURVEY OF CANADA
F. H. PETERS - - - - - DIRECTOR

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THE REVISED SHEETS OF THE SECTIONAL MAP OF CANADA

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PURPOSE—WHAT THEY ARE

In the system of survey covering the Prairie Provinces of the Canadian West, the townships are laid out in blocks six miles square with roads one mile apart in some cases and two miles apart in others. The original survey of these townships was begun about half a century ago. Since the original survey a great deal of development has taken place and the skeleton form of these townships has been built up with new roads and road diversions, railroads, cities, towns, villages, reserves in some cases

for various purposes, and in general features of every kind that accompany western development. In addition, also, nature herself has been at work and in some cases where water areas, for instance, were met with at the time of the original survey, there may now be good grazing or even agricultural land. Features may also have been altered as the result of large marshes or other low-lying wet areas being drained or by the construction of irrigation canals and reservoirs.

The plans and maps produced at the time of the original survey and occasionally revised in some particulars when further surveys were made, cannot be expected to show in detail the features that exist to-day on the ground, that is, what are known as the "topographic" features. These topographic features are of two kinds: those of nature, as lakes, rivers, streams, the "lay" of the ground, etc., and those made by man, as cities, towns, villages, isolated houses, highways, railways, etc.

The importance of properly showing all these features is fully recognized in the making of what is known as the topographic map. Other countries have fully recognized this importance by instituting extensive programmes for topographical mapping, which work is regularly considered as one of the major governmental functions. The maps are not only made from original surveys, but from time to time they are revised and brought up to date. In the

Canadian West; the first topographical surveys instituted by the Topographical Survey of Canada were begun in 1887 and took in mountainous districts where the maps would be of especial interest to tourists.

The true topographic map is a representation to scale on a sheet of paper of the natural and artificial features of a district. The scale of the map is the relation between distances on the map and corresponding distances on the ground. Topographic maps may be on any scale depending upon the uses to which they are put. The exactitude and clearness with which the features are shown, together with the amount of detail presented, determines the quality of the map.

In mapping the Canadian West on a scale to show the features in sufficient detail for most purposes connected with general development, with the six-mile square township as the unit of subdivision, the country has been divided into areas fifteen townships wide in an east and west direction and eight townships north and south. That is, each area is about ninety miles by forty-eight miles or about four thousand three hundred square miles in extent. The features of each area are shown upon a separate sheet, the combined sheets being spoken of as the Sectional Map of Canada. Each sheet is given a number, the numbering starting at the International Boundary, and is also given a name after some feature of interest

depicted thereon. Thus, the Edmonton sheet of the Sectional Map of Canada covers an area in which the city of Edmonton is an important feature; the Moose Mountain sheet is named after Moose mountain, etc.

These sheets have been published by the Topographical Survey of Canada for many years and in individual cases new editions have been brought out. The information shown on them, until a few years ago, was obtained from surveyors' field notes and from whatever other sources were available without carrying on actual field investigations for this particular purpose. However, all the available information was not such as to make these sheets into true topographic maps.

With the settlement of the country, these sheets were found to be inadequate for the purposes expected of them and accordingly a few years ago a systematic programme was instituted for revising the more important of them and so converting them into true topographic maps. This programme of revision is still being carried on. Field parties are sent out to obtain, by the most approved methods, all information necessary to effect this purpose. Using motor transport from conveniently placed camps and systematizing the work as much as possible, a small survey party is able to collect the necessary information in one summer field season for the revision of one sheet.

At the Head Office in Ottawa, at the close of the field season, the preparation for issue of the revised sheets is immediately undertaken. With the advantage also of draughting offices and a complete photolithographic plant, together with the necessary staff, all under one roof, the Topographical Survey of Canada has been able to issue the maps in a finished form to the public in a minimum of time.

DESCRIPTION—WHAT THEY SHOW

Each revised sheet of the Sectional Map of Canada being a true topographic map is a conventionalized picture of that part of the country covered. Symbols are used to show the natural and artificial features that go to make up the topography of the section. Each of the features requires a separate sign or symbol for its representation on the map. This necessitates not only the use of symbols of various forms and shapes but also the use of different colours. Even the thickness of lines in some cases, and the style of lettering in others, have their significance.

The revised sheets are well balanced between clearness, legibility, and the amount of detail shown. They are twenty-four inches by thirty-four inches in size, and may be had printed on thick or thin paper. The thin paper edition is also put up in folder form for convenience in carrying in the pocket.

On each sheet legends for reference are printed at the bottom, in which the symbols used are shown and defined, as well as other information presented for reference purposes. The following descriptions of the symbols used and the details recorded on these sheets are intended to show how easily the large amount of information presented thereon may be understood.

Scale.—The scale of the map is one inch to three miles, or the natural scale of 1 to 190,080. That is, one inch on the map represents three miles or 190,080 inches on the ground. Consequently a township is two inches square on the map, while a section measures a third of an inch.

Townships.—The township outlines are in neutral coloured hatching. The section lines, where there are no roads, are shown by a neutral coloured line, the quarter-section lines being also in the same colour. The townships and ranges are numbered across the centre of the map. Thus the system of survey in the Canadian West serves the same purpose in locating any point as does the system used on all European military maps, by which the map is divided off into squares with each square numbered or lettered. By the manner in which the sheets of the Sectional Map of Canada are printed, there is no difficulty in locating any section or quarter-section.

Roads.—The roads are classified in four different classes depending upon their condition and use:

Class 1.—Roads which are the main highways between cities or the tourists' roads, are shown by a double black line filled in, in red.

Class 2.—Roads which are the main roads between towns, or the main roads serving large districts are shown by a double black line filled in, in brown.

Class 3.—Roads which are local roads well travelled and usually in good condition are shown by a solid black line.

Class 4.—Roads which are local roads with little travel and usually in poor condition are shown by a broken black line.

Pack trails.—Pack trails are shown by a dotted black line.

Great care is taken to have the roads on the map as they actually exist on the ground at the time of the investigation. Road diversions are in their exact positions and wherever a road leaves a regular road allowance its course through the section is carefully mapped. It is apparent that with all the roads and trails so clearly shown, a motorist may readily pick the best road between any two towns, or from any town to any quarter-section, or from any quarter-section to any other quarter-section, even though these may be many miles apart. A motorist would simply follow roads shown in red as far as possible, then those in brown and then the solid black ones,

only using the poorest ones, those shown in broken black, where absolutely necessary.

Bridges, Fords, and Ferries.—Wherever a road crosses a stream its mode of crossing is clearly indicated. The letter "F" is used if a ferry, the word "Ford" if a ford. No special symbol is used for a bridge as it is considered self evident, that if the crossing is neither a ferry nor a ford it is a bridge.

Railways.—Railways, stations, sidings, and stops are shown on the map in the following ways:

Single track railway.—A heavy solid black line.

Double track railway.—A heavy solid black line with short cross lines.

Electric railway.—Same as double track railway, but the lines much finer.

Station.—Small solid black oblong alongside the line showing the railway.

Siding or stop.—Small black circle on the line showing the railway.

Water Areas.—All water areas are shown in blue thus:

Permanent lake.—Solid blue with outline in blue line. The depth in feet is given for all permanent lakes.

Non-permanent lake.—Area filled in with broken horizontal blue lines, with outline in blue line.

Alkaline flat.—Area filled in with blue dots, with outline shown by blue dots.

Marsh.—In the conventional blue hachures as shown on all topographic maps.

River three chains wide or over.—Double blue line with space between in solid blue.

River under three chains in width.—Single blue line.

Brook or creek.—Single blue line.

Non-perennial stream.—Broken blue line.

Irrigation canal.—Heavy straight blue line.

Drainage canal.—Heavy broken blue line.

Woods and Forests.—Areas covered by forests and heavy woods are in heavy green colour. The classes of trees, whether coniferous or deciduous, are shown by black symbols scattered throughout the area, a different symbol being used for each of these classes.

Areas covered by light woods, park lands, bluffs, and scrub are in light green with the black tree symbols in lesser number.

Buildings.—Buildings are small black squares. In the case of farm buildings, one symbol only is shown for each group of buildings, except where there are two or more houses on one quarter-section.

School.—Small black square with flag.

Church.—Small black square with cross.

Rural post office.—A small black square with the letter "P" enclosed in a circle alongside.

Cities, Towns or Villages.—The built-up areas of the larger centres of population are shown in as much detail as the scale will permit. Where class 1 or class 2 roads pass through them, the routes are indicated. Symbols are also used for elevators, gasoline stations, post offices, and telegraph offices, thus:

Post office—the letter “P” enclosed in a circle.

Telegraph office—the letter “T” enclosed in a circle.

Gasoline station—the letter “G” enclosed in a circle.

Elevator—the letter “E” enclosed in a circle.

Telephone Lines.—Telephone lines are indicated by small black dashes alongside the roads. These, for convenience, are always shown on the map on the south or west side of the roads.

Mines or Quarries.—The locations of mines or quarries are shown by a conventional symbol resembling a crossed axe and pick.

Forest Reserves.—The boundaries of forest reserves are in green hatching. Ranger stations and look-out towers have the symbols in black of a flag and a pennant respectively.

Indian Reserves.—The boundaries of Indian reserves are in red hatching.

Dominion Parks.—The boundaries of Dominion Parks are in broken green lines.

Information along borders.—Along the borders of the map the degrees of latitude and longitude are indicated, and in the case of first and second class roads the distances to the nearest town or city is given. For convenience in dealing with information extending from one sheet to another a strip approximately one-half mile in width is included overlapping on areas shown on adjoining sheets.

Relief or "Lay" of the ground.—The relief of the country, or "lay" of the ground, except in a few cases, is shown on these maps by means of 50-foot contour lines. These contour lines are in brown with every fourth one emphasized. A contour line is a line of even elevation, *i.e.*, every point on a contour line is the same height above sea level. They might also be described as successive shore lines, if we were to assume that the sea-level would change. That is, if the sea were raised 2,000 feet, the 2,000-foot contour line would be the new shore line of the sea, and all summits above the 2,000-foot contour line would be islands. If a person were to trace out on the ground the course of a contour line, he would neither go up nor down hill, but would always stay on the same level. These contour lines show clearly the relief of the country. They indicate the places where the country is hilly or where it is nearly level, or where there are coulees and valleys, etc. From these the drainage basin areas for all streams can be estimated. The elevation also of any point on the map can be

estimated within small limits, as the elevation of the country between any two contour lines is greater than the lower one and less than the higher.

The contour lines on these maps are for the most part derived from barometric elevations and, although not strictly accurate, are sufficiently accurate for all purposes that the scale of the map will allow. The elevations are shown on all contour lines, and also at all railway stations and lakes. The elevations along the railways are from spirit levels and are reliable for all engineering purposes.

USES—WHOM THEY ARE USEFUL FOR

The uses to which the Revised Sheets of the Sectional Map of Canada can be put are numerous and varied. A number of their uses are listed, but these are by no means all, as new uses for them are being found from time to time.

Automobile Agents.—Automobile agents will find these maps the best possible road maps. As every farm house is marked, the agent from his own information, can readily note on the map the farms where there are cars and can see at a glance where new business may be looked for.

Auto Liveries.—Every farm house and every road is shown. The roads are in four different classes, so that the livery-man can pick out the best road

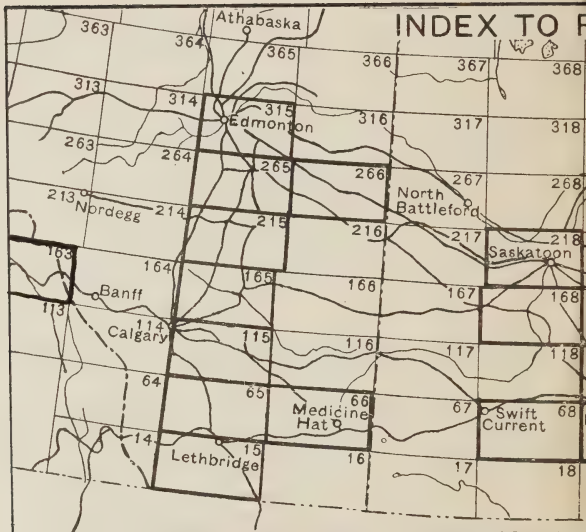
from any town to any other town, or from any town to any farm house. The distances also can be easily obtained.

Assessors.—The information shown for every section includes houses, lakes, marshes, bush or prairie, relief of ground, roads around section and to town, telephone lines, and distances to town, to school, and to neighbours. This information is valuable in estimating comparative assessment values. It also furnishes the assessor with a plan on which he can place his own information for reference purposes.

Bankers.—The local banker has a map with all the houses, with the roads in their various classes, and with other improvements in the district recorded. The map is a great aid to him in making loans. He will be better able to judge as to whether any new enterprise dependent upon the settlement of the country is economically sound. For Head Office these maps will help to give a check on the manner in which local managers are making their loans.

Boy Scouts.—For summer camps these maps will be very useful in teaching the boys map-reading, and in laying out routes for hikes, hare and hounds, etc. They will be found valuable for picking good camp sites, and for giving the boys knowledge of the country in the vicinity of the camp.

Canvassers.—The comparative sizes of the cities and towns are indicated and the location of every



INDEX TO F

The following sheets of the Sectional Map of Canada

No. 15, Lethbridge
 No. 21, Turtle Mountain
 No. 22, Dufferin
 No. 23, Emerson
 No. 65, Macleod
 No. 66, Medicine Hat

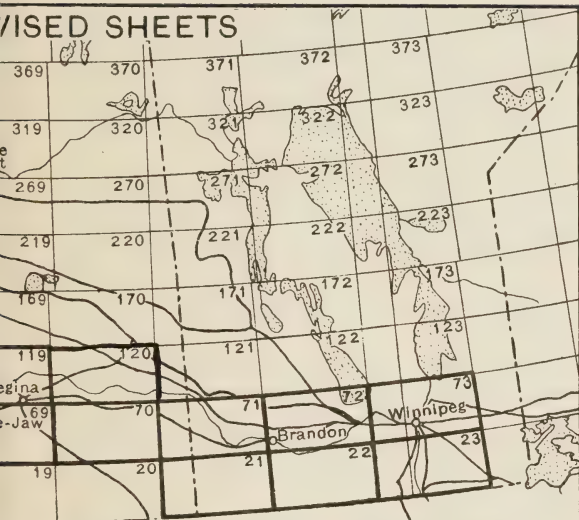
No. 68, Swift Current
 No. 69, Moose Jaw
 No. 70, Moose Mountain
 No. 71, Virden
 No. 72, Brandon

The following sheets of the Sectional Map of Canada

No. 20, Weyburn
 No. 67, Maple Creek
 No. 114, Calgary

No. 118, Rush Lake
 No. 120, Qu'Appelle *now*
 No. 163, Donald *—*

REVISED SHEETS



have been issued in the revised form up to 1st April, 1925.

No. 73, Winnipeg
 No. 115, Blackfoot
 No. 119, Regina
 No. 165, Rosebud
 No. 168, The Elbow

No. 215, Red Deer
 No. 218, Saskatoon
 No. 265, Peace Hills
 No. 266, Wainwright
 No. 315, Edmonton

are at present in the process of revision.

No. 164, Banff
 No. 170, Yorkton

No. 216, Sullivan Lake
 No. 316, Vermilion

farm house. By the use of the map, roads leading from any town to any farm house may be noted at a glance, as well as the location of gasoline stations, if automobiles are used. Consequently routes may be laid out to take in the greatest number of houses in the shortest time.

Campers.—To those who enjoy the open and wish to study and know the country traversed in auto trips or on camping excursions, a topographic map is the best guide. All summer resorts are shown, with the best roads to them. Trips may be planned, and camping sites can be better located from these maps.

Collectors.—By the use of the map, roads leading from any town to any farm house may be noted at a glance, as well as the location of gasoline stations, if automobiles are used. Consequently routes may be laid out to take in the greatest number of houses in the shortest time.

Commercial Travellers.—Commercial travellers will find these maps of great value as road maps. From the amount of settlement shown adjacent to the towns, a better estimate may be made of the amount of business the merchants should do.

Creameries.—The maps show the number of farms in the vicinity of the creameries and connecting roads, a great help in estimating the amount of available cream. For new districts, a close estimate may be

made as to whether there are enough farmers to support a creamery. Creameries using their own trucks for collecting cream will be able to route the trucks to the best advantage from these maps.

Engineers.—These maps are excellent reconnaissance maps for drainage schemes, irrigation projects, railway locations, the location of power plants and transmission lines, location of highways, telephone lines, water supply for towns, location of bridges and dams. By their use engineers will save much in preliminary surveys.

Farmers.—To the farmer these maps, presenting a variety of information, are of great value. They give the routes from his own home to the surrounding centres of population, or to his neighbours and indicate the grades to be surmounted. This latter information is of great value in hauling heavy loads to market. They show neighbouring cities and towns in comparative size. They locate schools and churches. They give the shape and size of water areas with depths of permanent lakes and present a very good idea of the drainage of the country. They tell him how far away are the nearest bush areas and the class of trees, whether coniferous or deciduous, also the parts, if any, enclosed within forest reserves. Where there are local coal mines the routes thereto are given. In general these maps give to the farmer a better understanding of the district in which he lives and the surrounding districts, than he could

ever hope to obtain otherwise. If he contemplates purchasing a farm, he can obtain from the map information regarding churches, schools, roads, and other features of any district.

Forestry Engineers.—These maps give the locations of bush areas and indicate whether the bush is heavy or light, coniferous or deciduous. They indicate the vacant lands and give an idea of areas that might economically be reforested. They show the boundaries of reserves and the topography within them.

Geologists.—These maps can be used by geologists as reconnaissance maps in studying physiography and working out the relations between surface and underground structures. They are useful in obtaining an idea of the age of the land forms and the character of the soil, the behaviour of streams and sub-surface waters, and the underground structure of any section of the country.

Girl Guides.—For instructing girl guides in map-reading these maps will be found most valuable. They can be used in summer camps for arranging hikes, boating trips, and for teaching the girls the nature of the country in the vicinity of their camp.

Grain Companies.—These maps give the location of every farm house and every railway. By studying the settlement of any district, the places where new elevators are likely to be required may be noted.

Hunters.—These maps show lakes, sloughs, and marshes, as well as bush areas, together with the roads to and through them. By their use hunters will be better able to pick out likely spots for both duck and chicken shooting.

Hotels.—Hotels will find these maps of much value in presenting to their guests authentic information regarding roads and other features of their district.

Insurance Agents.—As these maps show every farm house and the roads to them, insurance agents can keep in close touch with their farmer policy holders, and can also plan on new rural prospects.

Implement Dealers.—Implement dealers can place on these maps the names, in their proper location, of the farmers who are their customers. The location of possible new business may also be studied.

Loan Companies.—These maps show the position of every farm house, the type of the surrounding roads, and the location of the nearest telephone line. The distance to the nearest town, the kind of road, and coulees or valleys, if any, to be crossed, may be seen. They indicate the amount of settlement in the township and the position of the nearest school, also whether the section is heavy bush, light bush, or prairie, and if there are any large water areas or creeks. They give the elevation of the section and also that of the surrounding country. By the use of

the information which is readily obtained from the map, a loan company is better able to decide whether the section is favourable for a loan or not.

Merchants.—All farm houses, roads and telephone lines are indicated on these maps. This facilitates the merchant in estimating the amount of rural business which he should do and enables him to keep in closer touch with his farmer customers.

Motorists.—To the motorist these maps are invaluable. Every road and trail is plainly shown under four different classes, so that it is a very easy matter for him to determine the best route from any one place to any other place. A mental picture of the route he has to follow may also be obtained, as all farm houses, schools, churches, railways, telephone lines, lakes, marshes, rivers, creeks, and centres of population, as well as the relief of the country are shown. In addition, the location of gasoline service stations, the location of telephones in case of breakdown, and the comparative sizes of the cities and towns may be obtained from the map. By the latter information the probable garage service and hotel accommodation may be assumed.

Municipal Officers.—Municipal officers have on these maps a topographic map of their municipality. All roads and major local improvements are shown. On these maps a study can be made of the roads which require grading, the best roads to improve to

reach isolated farms, the location of bridges and ferries, and the drainage schemes. The future development of a municipality may be planned on them.

Police.—These maps show all farm houses, all roads, and all telephone lines. From them the police can determine possible routes a fugitive from justice may take and also where he may find shelter, thus assisting in his capture.

Railway Companies.—Railway companies will find these maps good reconnaissance maps, on which new lines can be located. As they show the settlement, they indicate where new lines may be required or in cases of existing lines where new sidings may be needed. In cases of trestles across creeks, they indicate their drainage areas from which the size of the bridges or culverts may be estimated. In some cases they show where the grade may be economically changed, and are also of assistance in determining the locations and sources of water supply.

Real Estate Agents.—These maps give much information valuable to real estate agents, particularly to those making a specialty of farm lands. They show every farm house and the type of every road, the location of telephone lines, the distances to the towns and to the schools, the elevation of all sections and the relief of the country, the density of settlement, water areas, rivers, and creeks. From a study of the maps

a good idea of the whole country may be obtained. Real estate agents will find them very useful to mark their listings upon, and also to send to prospective buyers.

Schools.—One of the greatest uses for these maps is in teaching local geography to the pupils in the schools. In other countries local geography is taught in this way. For each school district every house, road, lake, river, creek, telephone line, bush area and relief of the country is shown. The pupils will take much more interest in learning geography from a map which not only locates their school house with the teacher's residence, but also their own houses with all the roads and natural features between.

School Inspectors.—For the school inspector these maps give the location of every school, an idea of the surrounding country, and the type of roads. He is better able to lay out his routes when on an inspection tour. The maps are also an aid to him in examining pupils as to their knowledge of local geography.

Tourists.—These maps show the best roads between towns, the comparative sizes of the towns, and whether in each case there is a post office, telegraph office, elevator, or gasoline station. They show all houses and telephone lines along the roads travelled, rivers and creeks crossed and lakes passed by. They give a picture of the route so that a tourist need never be lost.

Wholesale Executives.—These maps show the settlement in any district in which the wholesaler may be interested. They show the major improvements in that district and the location and comparative sizes of all the towns. A wholesaler in a city has a picture of the whole country before him. This is an aid in dividing his districts to the best advantage, routing his travellers, or in determining whether it is more economical for them to travel by train or by automobile. From the maps also he may obtain an idea of what localities might be expected to contribute further to his business.

OTHER WORK CARRIED ON

The Sectional Map of Canada, which covers the three Prairie Provinces and a part of British Columbia is indexed to conform to the system of subdivision by which this part of the country is laid out into townships. It does not cover other territory. In other territory a general map index, designed to cover the whole country, is made use of. This general map index divides the country for mapping purposes, into sheets depending not directly upon any subdivision survey, but rather upon parallels of latitude and meridians of longitude and has the added advantage that it fits in with the sheets of the International Map of the World.

Topographical mapping conforming to this latter system of indexing is at the present time being carried on in the more thickly populated parts of Eastern Canada and British Columbia.

The topographical mapping referred to above, however, is only a part of the regular work carried on by the Topographical Survey of Canada.

Further classes of work include: the laying down, north of settlement, of a survey net for control purposes and exploratory work in connection therewith; the use of the aeroplane in co-operation with the Royal Canadian Air Force for mapping northern waterways and for other surveying purposes; the carrying on of land classification and soil surveys as an aid to the intending settler; land surveys proper of various kinds; surveys of mountainous areas by the use of the camera; magnetic surveys; and others.

It is impossible, in this small pamphlet, to explain at length these various activities or to list in detail the maps and reports in connection therewith that are available to the public. Further information, however, may be obtained by writing direct to the office of the Topographical Survey of Canada, Department of the Interior, Ottawa.

THE REVISED SHEETS—HOW THEY MAY BE OBTAINED

The Revised Sheets of the Sectional Map of Canada may be obtained upon application to the Topographical Survey of Canada, Department of the Interior, Ottawa, upon payment of a nominal charge. They may be had in either thick or thin paper for twenty-five cents, or on thin paper put up in folder form for convenience in carrying for fifty cents.

The sheets of the Sectional Map of Canada that have not been revised to show complete topographic information may be obtained in either thick or thin paper for fifteen and ten cents respectively.

For areas covered by the sheets of the Sectional Map of Canada see index map on pages 16 and 17 of this pamphlet.

